



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

09/827,794

04/06/2001

John F. Astorino

60426-257;

8887

2000P07668US01

24500

7590

05/21/2004

EXAMINER

MICHALSKI, JUSTIN I

SIEMENS CORPORATION
INTELLECTUAL PROPERTY LAW DEPARTMENT
170 WOOD AVENUE SOUTH
ISELIN, NJ 08830

ART UNIT

PAPER NUMBER

2644

5

DATE MAILED: 05/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/827,794

Applicant(s)

ASTORINO ET AL.

Examiner

Justin Michalski

Art Unit

2644

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 April 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2 and 3.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 2, 6, and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Kameda et al. (Hereinafter "Kameda") (US Patent 5,571,239).

Regarding Claim 1, Kameda discloses a method of noise attenuation comprising the steps of: generating a noise canceling signal (Figure 2, output of generator 16C) from a control unit (16) based on an environmental assumption (Kameda discloses predetermined reference temperature (i.e. environmental assumption) (Col.2, lines 38-41; Col. 7, lines 1-7): assessing the environmental assumption of the control unit (sensor 13 to controller 16; Col. 7, line 9, temperature T1); and altering the noise canceling signal based on the assessment (Figure 14 discloses Control signal generator M4 is a function of temperature detector M3).

Regarding Claim 2, Kameda further discloses the step of comparing the environmental assumption with actual environmental data (Kameda discloses Formula 5, Col 7 which is a function of actual data (T1) and environmental assumption (T0).

Regarding Claim 6, Kameda further discloses the environmental assumption is assessed more than once (Kameda discloses Figure 9 which is a predetermined operational cycle) (Column 7, lines 25-29).

Regarding Claim 7, it is inherent that a predetermined amount of time (i.e. any amount of time) would be necessary in order to make an assessment.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 3-5, and 8-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kameda et al. (US Patent 5,571,239).

Regarding Claim 3, Kameda does not explicitly disclose the use of a test sound wave but discloses an intake noise wavelength at a reference temperature (i.e. test sound wave generated theoretically) (Col. 7 lines 1-7). This information is combined and used to generate actual engine speed conditions shown in Formula 5, Column 7).

Regarding Claim 4, Kameda discloses comparing the test sound wave with a model of the sound wave (Figure 15, Map M41) based on the environmental assumption (M3).

Regarding Claim 5, Kameda discloses comparing the speeds (Kameda discloses acoustic velocity of based on temperature (Col. 6, lines 41) of the test sound wave and the model of the sound wave (Figure 15, map M41).

Regarding Claim 8, since Kameda discloses noise cancellation on an engine, it would be obvious to one of ordinary skill in the art that the operation of the noise canceling signal will cease when the engine is turned off.

Regarding Claim 9, Kameda further discloses Figure 9 which discloses an operational cycle. Since the cycle continually runs start to end it is inherent that when the engine stops the noise canceling signal will cease prior to the next step of assessing the environmental assumption in block 100.

Regarding Claim 10, Kameda discloses a method of noise attenuation comprising the steps of: generating a noise canceling signal (Figure 1, output of amplifier 17) from a control unit (controller 16) based on an environmental assumption (Kameda discloses predetermined reference temperature (i.e. environmental assumption) (Col.2, lines 38-41; Col. 7, lines 1-7); sensing a system condition (Figure 15 temperature sensor M3); ceasing the generation of the noise canceling signal based on the system condition (Kameda discloses noise cancellation on an engine, it would be obvious to one of ordinary skill in the art that the operation of the noise canceling signal will cease when the engine is turned off); assessing the environmental assumption of the control unit (temperature sensor M3); and altering the noise canceling signal based on the assessment (Figure 14 discloses Control signal generator M4 is a function of temperature detector M3).

Regarding Claim 11, Kameda further discloses the step of comparing the environmental assumption with actual environmental data (Kameda discloses Formula 5, Col 7 which is a function of actual data (T1) and environmental assumption (T0).

Regarding Claim 12, Kameda does not explicitly disclose the use of a test sound wave but discloses an intake noise wavelength at a reference temperature (i.e. test sound wave generated theoretically) (Col. 7 lines 1-7). This information is combined and used to generate actual engine speed conditions shown in Formula 5, Column 7).

Regarding Claim 13, Kameda discloses comparing the test sound wave with a model of the sound wave (Figure 15, Map M41) based on the environmental assumption (M3).

Regarding Claim 14, Kameda discloses comparing the speeds (Kameda discloses acoustic velocity of based on temperature (Col. 6, lines 41) of the test sound wave and the model of the sound wave (Figure 15, map M41).

Regarding Claim 15, Kameda further discloses the environmental assumption is assessed more than once (Kameda discloses Figure 9 which is a predetermined operational cycle) (Column 7, lines 25-29).

Regarding Claim 16, it is inherent that a predetermined amount of time (i.e. any amount of time) would be necessary in order to make an assessment.

5. Claim 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kameda in view of Yuan et al. (US Patent 5,359,662).

Regarding Claim 17, Kameda discloses an air induction system comprising: an air induction body (Figure 1; Col. 5, lines 16-41); a speaker in proximity to said air induction body (Speaker 18); a reference sensor (sensor 13); and a control unit (Controller 16) with a noise attenuation feature based on an environmental assumption

communication (Kameda discloses predetermined reference temperature (i.e. environmental assumption) (Col.2, lines 38-41; Col. 7, lines 1-7) with said speaker (18), and said reference sensor (13), wherein said control unit assesses said environmental assumption and alters said noise attenuation feature based on the assessment (Figure 14 discloses Control signal generator M4 is a function of temperature detector M3). Kameda does not disclose the use of a microphone in communication with said speaker. Yuan et al. also discloses noise cancellation of an air intake system and uses speakers (Figure 1, references 30 and 34) to measure the residual noise remaining in the system. The microphone signals modify the output to minimize the residual noise (Col. 6, lines 15-36). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include microphone in communication with the speaker cancel residual noise of the system as taught by Yuan et al.

Regarding Claim 18, Kameda further discloses the step of comparing the environmental assumption with actual environmental data (Kameda discloses Formula 5, Col 7 which is a function of actual data (T1) and environmental assumption (T0).

Regarding Claim 19, Kameda does not explicitly disclose the use of a test sound wave but discloses an intake noise wavelength at a reference temperature (i.e. test sound wave generated theoretically) (Col. 7 lines 1-7). This information is combined and used to generate actual engine speed conditions shown in Formula 5, Column 7).

Regarding Claim 20, Kameda disclose using a model (Figure 15, map M41) as a function environmental assumption (temperature, M3). Yuan et al. discloses microphones 30 and 34 which detect the noise from the air intake system (i.e. test

signal). Detected signals are sent to the noise controller (26) and compared to determine if noise is present. If noise is present controller modifies output of speakers 28 and 32 to correct for residual noise.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Justin Michalski whose telephone number is (703)305-5598. The examiner can normally be reached on 8 Hours, 5 day/week.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bill Isen can be reached on (703)305-4386. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JIM

2

XU MEI
PRIMARY EXAMINER